

M.Sc. (Microbiology) (NEP Pattern) Semester-I
NEP-74-1 / 01MSCMB04 - Paper-IV : Microbial Physiology & Metabolism

P. Pages : 1

Time : Three Hours



GUG/S/25/15128

Max. Marks : 80

1. Discuss mitochondrial electron transport chain in detail. 16
- OR**
- a) Give detailed note on Krebs cycle. 8
- b) Discuss Glycolysis and its regulation. 8
2. Discuss light reaction of photosynthesis in detail. Add a note on structure of chloroplast. 16
- OR**
- a) Discuss in detail about biosynthesis of fatty acids. 8
- b) Describe in detail about mechanism of energy generation in cyanobacteria. 8
3. Discuss biosynthesis purines & Pyrimidines in detail. 16
- OR**
- a) Discuss Urea cycle and its regulation in detail. 8
- b) Write a detailed note on biosynthesis of amino acids. 8
4. What is nitrogen fixation? Discuss symbiotic nitrogen fixation in detail. 16
- OR**
- a) Write a detailed note on nitrogenase complex. 8
- b) Discuss nitrogen cycle in details. 8
5. Write a note on.
- a) Chemiosmotic hypothesis for ATP synthesis. 4
- b) C₄ pathway. 4
- c) Degradation of nucleotides. 4
- d) Nif gene 4
